Applicant: Roberts, et al. Attorney's Docket No.: 15670-054US1 / SD2002-186

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Page: 2 of 18

## Amendment to the Specification:

Please replace the paragraph [0023] beginning at page 9 with the following amended paragraph:

[0023] The streamwise thermal-gradient CCN chambers described here can generate a well-defined supersaturation to simulate cloud-formation in a controlled environment. The some notable features of these CCN chambers include:

- 1. Temperature temperature gradient in the streamwise direction generates the supersaturation by exploiting the difference in diffusion between heat and water vapor.
- Continuous continuous flow allows fast sampling (1 Hz 2. measurements), which is suitable for airborne measurements.
- Supersaturation supersaturation is nearly constant at the centerline (for a constant and increasing temperature gradient), which maximizes droplet growth.
- Supersaturation supersaturation is a function of the flow rate, the pressure and the temperature profile inside the chamber, which can be easily controlled and maintained.
- Simple simple cylindrical geometry reduces size and minimizes buoyancy (or other secondary flow) effects.

The principle of the CCN chambers has been validated by controlled laboratory experiments and independent measurements.